

Planetary Forecaster
What is Temperature and How Does it Differ Across Earth's Surface?
LS 1.3
Creating a Prediction Map on Paper and in My World

Read page 15 as a class then answer the following questions.

- a) Where are the highest temperatures on this map?
- b) Where are the lowest temperatures on this map?
- c) How are variations in temperature represented on this map?
- d) Using the temperatures shown, create a key for this map. The key should allow someone to use the map to identify the temperature of a location, even if the temperatures are not shown on the map.

Procedure

1. Read the directions on page 16 to create a prediction map of surface temperatures around the world
2. There are eight locations indicated on the map on page 17.

a) Give the reasons why you made the temperature predictions you did for these areas.

b) In what areas were you confident about your temperature predictions? What information did you use to make these predictions?

c) In what areas were you less confident about your temperature predictions? What information did you use to make your predictions in these areas?

d) Describe any patterns you observed while coloring your map. How do you think these patterns may have helped you complete the map?

e) Describe any observations or thoughts you may have had while coloring your map that might explain why different regions on Earth's surface are different temperatures at the same time of the year.

Conference

Share and discuss your map with your partner and then with your group. Listen and observe as others present their maps to the group. As you present your prediction map, include answers to these questions.

How did you decide what temperatures to use to color each area?

How did you decide where to start and where to go to next?

In which parts of the world do you feel very confident about your predictions, and which parts do you feel unsure about?

Work with your partner to create a prediction map based on the discussions you had with your group. Begin with the areas where most of the people in your group were in agreement and then focus on the areas where there is disagreement.

Using My World

- Read page 19 as a class. You will be using the My World software to create an electronic version of your prediction map to become familiar with the program.
- Follow the procedure on pages 21 and 22 to create your prediction map
- When you are done SAVE your map following your teacher's directions. YOU MUST SAVE YOUR MAP!!!

Reflect

Answer the following questions. Be prepared to share your answers with your group and your class.

1. What ideas guided your group as you created the prediction map? For example, you may have thought, "It is cold at the poles because there is snow and ice there."

2. Were there any areas where your group was unsure about the temperature predictions? What steps did you take to solve these problems?

3. While coloring your group map, were there any situations in which you needed more information? Describe what they were.

4. While painting your prediction map, what patterns did you observe? Were there certain parts of the map that seemed to have a lot of the same color?

5. Did your thinking change at all since you colored the first map on paper? Describe how and why.

6. How did the use of computer software make the task easier or more difficult? Describe your experience.

7. Make a list of all the information and skills that you gained from this investigation that you can apply to your *Planet X* challenge.